Maintenance & Troubleshooting
Oil-Less Air Compressor

Description:
Apollo Dental Products Air Compressors are designed to provide years of trouble-free, reliable service. Certain components do require periodic attention and service. Failure to adequetly service these components will not only cause failure of the compressor, but will also result in unsatisfactory service. If you require additional information, contact ADP Technical Support between the hours of 6:00 a.m. and 4:00 p.m. (Pacific Standard Time).

Maintenance:

A. Storage Tank (Standard Models Without Desiccant Drying System)
Check Water Build-Up In Storage Tank Monthly. To check, locate drain valve on bottom of storage tank and slowly open. If moisture is present, allow all moisture to be expelled before closing the valve.

B. Air Intake Filter-Muffler
Replace Filter-Muffler Annually. A dirty air intake filter-muffler decreases the efficiency of the compressor and increases pump-up times. Replacement filter-muffler part #ACP90500.

C. Coalescing Filter
Replace Ultrair Coalescing Filter Annually. The ADP Ultrair Coalescing Filter is designed specifically for removing moisture and other contaminates from compressed air before it enters the drying system.

D. Condensate Drain Canister
Empty Condensate Drain Canister Weekly.

E. Pump-Up Times
Check Pump-Up Times Monthly. Refer to table for proper time readings.

F. Test For Leaks.
Use soapy water to find leaks. Repair all leaks. **Leaks are the #1 cause of premature compressor life.**

NOTE: Never lubricate the oil-less compressor. The Teflon-filled compressor rings are self-lubricating and do not require oil. The motor and crankshaft bearings are permanently lubricated.

Compressor Pump-Up Chart

Standard Compressor Models		Desiccant Compressor Models	
Compressor Model	**Compressor Pump-Up Time 80-100 PSI**	**Compressor Model**	**Compressor Pump-Up Time 80-100 PSI**
AOCOS11, 12	20-25 Seconds	AOCOS11D, 12D	35-40 Seconds
AOCOS21, 22	25-30 Seconds	AOCOS21D, 22D	35-40 Seconds
AOCOS31, 32	20-25 Seconds	AOCOS31D, 32D	30-35 Seconds
AOCOS42	25-30 Seconds	AOCOS42D	30-35 Seconds
AOCOT32	20-25 Seconds	AOCOT32D	30-35 Seconds
AOCOT42	25-30 Seconds	AOCOT42D	30-35 Seconds
AOCOT62	20-25 Seconds	AOCOT62D	25-30 Seconds
AOCOT82	10-15 Seconds	AOCOT82D	15-20 Seconds

Apollo Dental Products, Inc. • 245 W. Dakota Ave. • Clovis, CA 93612 • Technical Support
559/292-1444 • 800/233-4151 • Fax 559/292-1555 • www.apollodental.com

AMI60320 Rev. 8/01

PROBLEM: Compressor will not start.

Cause: No power at motor terminals.
Remedy: Check for voltage at wall outlet. If proper voltage is measured there and not at motor terminals, check for:
1. Broken or loose wire.
2. Pressure switch defective or out of adjustment (contacts should be closed if tank pressure is below 80 PSI).
3. Defective On/Off switch (DPST). Replace.

Cause: Defective capacitor. (Motor may hum but not start).
Remedy: 1. Short capacitor lead terminals and test capacitors using Ohm meter. Check for resistence rise. If there is no resistence rise, capacitor is defective and must be replaced.

Cause: Thermal overload cut-off on high temperature.
Remedy: 1. Allow motor to cool. Compressor should then automatically restart.

Cause: Frozen motor/compressor.
Remedy: 1. Turn off electrical power. Check to see if compressor fan will rotate by hand. If not, replace compressor head. Contact ADP for Return Authorization information.

PROBLEM: Motor runs for only a few seconds or "chuggs".

Cause: Low voltage.
Remedy: 1. Check line voltage. It should be at least 215 volts (230 volt units) + - 10% when compressor is running, or 105 volts (115 volt units) + - 10%. Install ADP transformer if necessary.

Cause: Blockage in air line.
Remedy: 1. Remove discharge line flex hose from head and test run. If unit runs correctly, check for obstruction in air line to storage tank. It most likely would be at an orifice or other restriction.

PROBLEM: Compressor head runs but will not pressurize to 100 PSI.

Cause: Quick exhaust valve or pressure switch unloader valve not closing when compressor runs.
Remedy: Quick exhaust valve or pressure switch unloader valve may be dirty or defective. Clean or replace.

Cause: Clogged air intake filter-muffler.
Remedy: 1. Check for excessive dirt/dust accumulation. Clean or replace.

Cause: Air leaks in system piping.
Remedy: 1. Check for leaks using soapy water solution. Repair any system piping air leaks.

Cause: Blockage in air line.
Remedy: 1. Inspect all air lines for restrictions.

Cause: Leak in compressor unit.
Remedy: 1. Close the storage tank shut-off valve. With compressor running, check discharge line flex hose, pressure safety valve, tank drain valve and all fittings for leaks, using soapy water.

Cause: Insufficient discharge.
Remedy: 1. Remove discharge line flex hose and check for pressure build-up by holding finger over discharge outlet fitting. If low or no pressure build-up occurs, head is defective. Contact ADP for Return Authorization information.

PROBLEM: Compressor cycles with no air being used.

Cause: Manual purge valve handle is in "ON" position (vertical).
Remedy: 1. Turn valve handle to normal "OFF" position (horizontal).

Cause: Leak in office air system.
Remedy: 1. Close the storage tank shut-off valve. Pump up storage tank to 100 PSI. If pressure is maintained at 100 PSI for 15-20 minutes, leak is in air system not in compressor.

Cause: Leak in compressor.
Remedy: 1. Storage tank check valve may be dirty or defective. Clean or replace.
2. Check for leaks at storage tank shut-off valve, pressure safety valve, tank drain valve and all fittings attached to storage tank using soapy water solution.

PROBLEM: Moisture indicator is pink.

Cause: Unloading system not functioning properly.
Remedy: 1. Check to see that the quick exhaust valve closes when the compressor is pumping. Remove the exhaust muffler to determine this.
2. Ensure that the quick exhaust valve and the pressure switch unloader valve opens as soon as the compressor stops. The purge tank gauge pressure should drop from 100 PSI to zero.
3. If quick exhaust valve is suspected of malfunctioning, visually check for:
A) Leaking or dirty exhaust valve diaphragm.
B) Pressure switch unloader operation. Adjust unloader tap screw if necessary.
C) Clogged exhaust muffler.

Cause: Saturated desiccant drying chamber.
Remedy: 1. Operate drying system in the manual purge mode. If after 1 week the system is not dry, replace the silica gel (desiccant).

Cause: Compressor running too frequently.
Remedy: 1. Compressor undersized for installation. Check with ADP Technical Support.
2. Leaks in air system. Locate and repair.

Cause: Condensation in air lines.
Remedy: 1. As the compressed air moves through the air lines to the operatory, it cools, causing condensation of any moisture particles in the air. This can result in wet operatory air. To prevent this, it is necessary to install a Mini Spitter Filter Kit (Part #ASA85315) in the dental unit. This will filter any condensation from the compressed air before it enters handpieces.

Under normal operating conditions, a small amount of moisture with some oil may be under the unloader exhaust muffler. This is not a malfunction. It is evidence of what the filter on the Desiccant Drying System captured the moisture, and did not permit it to enter the operatory air supply.

Warranty Information: 3 Year

All ADP units are thoroughly inspected and tested in accordance with rigid specifications and standards. Our products are guaranteed against any defective material and workmanship from the date of shipment; provided, that the installation, operation, and maintenance is done in accordance with ADP procedures as outlined in our Installation and Maintenance Guides. Warranty cards must be returned to ADP within ten days of installation to effect warranty. No other warranties or guarantees, expressed or implied are made.

ADP's obligation under the warranty is to provide parts for the repair or, at its option, to provide the replacement product (excluding labor). All special, incidental and/or consequential damages are excluded. We will not issue credit for complete air compressors or vacuum systems without first attempting to correct the problem in the field. Written notice of breach of warranty must be given to ADP within the warranty period. The warranty does not cove damage resulting form improper installation or maintenance, accident or misuse. The warranty does not cover damage resulting from the use of cleaning, disinfecting or sterilizing chemicals and processes. The warranty does not cover vacuum failures due to hard water deposits. Failure to follow instructions provided in ADP's Installation and Maintenance Guides may void the warranty.

Head Replacement Parts

Models	OS11,12 (D)	OS21,22 (D)	OS31,32 (D)	OS42,42D	OT32,32D	OT42,42D	OT62,62D	OT82,82D
Compressor Head Kit	HGH30204	HGH30210	HGH30220	HGH30225	HGH30204	HGH30215	HGH30220	HGH30225
Cylinder Gasket	HGA85118	HGA85118	HGA85118	HGA85118	HGA85118	HGA85118	HGA85118	HGA85118
Cylinder Head	HGA85107	HGA85107	HGA85107	HGA85107	HGA85107	HGA85107	HGA85107	HGA85107
Cylinder Relief Valve	HGA70520	HGA70510	HGA70510	HGA70510	HGA70520	HGA70510	HGA70510	HGA70520
Discharge Tube Sleeve	HGA70925	HGA70925	HGA70925	HGA70925	HGA70925	HGA70925	HGA70925	HGA70925
Fan - Compressor, Counter-Clockwise	HGA10315	HGA10315	HGA10315	HGA10315	HGA10315	HGA10315	HGA10315	HGA10315
Fan - Compressor, Clockwise	---	HGA10320	HGA10320	HGA10320	---	HGA10320	HGA10320	HGA10320
Fan Shroud	HGA30305	HGA30300	HGA30300	HGA30300	HGA30305	HGA30300	HGA30300	HGA30300
Head Gasket	HGA85117	HGA85117	HGA85117	HGA85117	HGA85117	HGA85117	HGA85117	HGA85117
Head Repair Kit	HGA85325	HGA85320	HGA85320	HGA85320	HGA85325	HGA85320	HGA85320	HGA85320
Inlet Valve	HGA85500	HGA85500	HGA85500	HGA85500	HGA85500	HGA85500	HGA85500	HGA85500
Motor Mounts	MRP70980	MRP70980	MRP70980	MRP70980	MRP70980	MRP70980	MRP70980	MRP70980
Outlet Valve	HGA85505	HGA85505	HGA85505	HGA85505	HGA85505	HGA85505	HGA85505	HGA85505
Piston Ring Set	HGA85400	HGA85400	HGA85400	HGA85400	HGA85400	HGA85400	HGA85400	HGA85400
Valve Plate	HGA85510	HGA85510	HGA85510	HGA85510	HGA85510	HGA85510	HGA85510	HGA85510
Valve Replacement Kit	HGA85335	HGA85335	HGA85335	HGA85335	HGA85335	HGA85335	HGA85335	HGA85335

Compressor Replacement Parts

Models	OS11,12 (D)	OS21,22 (D)	OS31,32 (D)	OS42,42D	OT32,32D	OT42,42D	OT62,62D	OT82,82D
Air Intake Muffler	PFM50955	PFM50955	PFM50955	PFM50955	PFM50955	PFM50955	PFM50955	PFM50955
Desiccant Drying Chamber	ACP90100	ACP90100	ACP90100	ACP90100	ACP90100	ACP90100	ACP90100	ACP90100
Desiccant Material	ACA85345	ACA85345	ACA85345	ACA85345	ACA85345	ACA85345	ACA85345	ACA85345
Discharge Line Flex Hose, 12 In.	PCH50200	PCH50200	PCH50200	PCH50200	PCH50200	PCH50200	PCH50200	PCH50200
Discharge Line Flex Hose, 21 In.	PCH50205	PCH50205	PCH50205	PCH50205	PCH50205	PCH50205	PCH50205	PCH50205
Drying Tower Filter	PFM70300	PFM70300	PFM70300	PFM70300	PFM70300	PFM70300	PFM70300	PFM70300
Exhaust Muffler	PFM70900	PFM70900	PFM70900	PFM70900	PFM70900	PFM70900	PFM70900	PFM70900
Fan-Cooling 115V (Quiet Models)	EMS10300	EMS10300	EMS10300	EMS10300	EMS10300	EMS10300	EMS10300	EMS10300
Fan-Cooling 230V (Quiet Models)	EMS10305	EMS10305	EMS10305	EMS10305	EMS10305	EMS10305	EMS10305	EMS10305
Flow Control Valve	PVV50530	PVV50530	PVV50530	PVV50530	PVV50530	PVV50530	PVV50530	PVV50530
Manual Purge Valve	PVV50545	PVV50545	PVV50545	PVV50545	PVV50545	PVV50545	PVV50545	PVV50545
Moisture Indicator Kit	ACA85965	ACA85965	ACA85965	ACA85965	ACA85965	ACA85965	ACA85965	ACA85965
On - Off Switch	ECS10417	ECS10417	ECS10417	ECS10417	ECS10417	ECS10417	ECS10417	ECS10417
Poly-Flow Drain Tubing Kit	ACA85960	ACA85960	ACA85960	ACA85960	ACA85960	ACA85960	ACA85960	ACA85960
Pressure Safety Valve	PVV50560	PVV50560	PVV50560	PVV50560	PVV50560	PVV50560	PVV50560	PVV50560
Pressure Switch / Unloader Valve	ECB10445	ECB10445	ECB10445	ECB10445	ECB10445	ECB10445	ECB10445	ECB10445
Purge Gauge	ACP70410	ACP70410	ACP70410	ACP70410	ACP70410	ACP70410	ACP70410	ACP70410
Quick Exhaust Valve 115V	PVV70501	PVV70501	PVV70501	PVV70501	PVV70501	PVV70501	PVV70501	PVV70501
Quick Exhaust Valve 208V	PVV70502	PVV70502	PVV70502	PVV70502	PVV70502	PVV70502	PVV70502	PVV70502
Quick Exhaust Valve Kit	AVC85330	AVC85330	AVC85330	AVC85330	AVC85330	AVC85330	AVC85330	AVC85330
Storage Tank Check Valve	PVV50510	PVV50510	PVV50510	PVV50510	PVV50510	PVV50510	PVV50510	PVV50510
Storage Tank Gauge	ACP70405	ACP70405	ACP70405	ACP70405	ACP70405	ACP70405	ACP70405	ACP70405
Shut-Off Valve	PVV50500	PVV50500	PVV50500	PVV50500	PVV50500	PVV50500	PVV50500	PVV50500
Tank Drain Valve	PVV50525	PVV50525	PVV50525	PVV50525	PVV50525	PVV50525	PVV50525	PVV50525
Tank Isolation Feet	MRP70965	MRP70965	MRP70965	MRP70965	MRP70965	MRP70965	MRP70965	MRP70965
Ultrair Coalescing Filter	ACA70305	ACA70305	ACA70305	ACA70305	ACA85215	ACA85215	ACA85215	ACA85215
Ultrair Filter Element	PFM85230	PFM85230	PFM85230	PFM85230	PFM85210	PFM85210	PFM85210	PFM85210